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CLASSIFICATION AND CORRELATION

OF

THE SOILS OF

# KNOX COUNTY INDIANA

**JUNE 1979** 

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U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
MIDWEST TECHNICAL SERVICE CENTER
LINCOLN, NEBRASKA

UNITED STATES DEPARTMENT OF AGRICULTURE Soil Conservation Service Midwest Technical Service Center Lincoln, Nebraska 68508

> Classification and Correlation of the Soils of Knox County, Indiana

The final correlation conference for Knox County, Indiana, was held the week of February 5-9, 1979. Those participating in the correlation were Leo Kelly, Party Leader, Soil Conservation Service; DeWayne Williams, Soil Correlator, Soil Conservation Service; and Steve R. Base, Soil Correlator, Soil Conservation Service. The data reviewed consisted of the initial draft of the manuscript, field notes, laboratory data, field sheets, correlation samples, engineering test data, field correlation, and the SCS-SOILS-6 forms. Steve R. Base also participated in the comprehensive field review which was held October 17-21, 1977.

Map symbols consist of a combination of letters or of letters and numbers. The first capital letter is the intital one of the soil name. The lowercase letter that follows separates map units having names that begin with the same letter, except that it does not separate sloping or eroded phases. The second capital letter indicates the class of slope. Symbols without a slope letter are for nearly level soils or miscellaneous areas. A final number of 2 indicates that the soil is moderately eroded and 3 that is severely eroded.

# Knox County, Indiana

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Field Symbol	Field Mapping Unit Name	Pub. Symbo	Approved Mapping  Unit Name
AdB	Ade loamy fine sand, 2-6% slopes	) AdB	Ade loamy fine sand, 2 to 6 percent slopes
AlA	Alford silt loam, 0-2% slopes	) AlA V	Alford silt loam, 0 to 1/2 percent slopes
AlB2	Alford silt loam, 2-6% slopes, eroded	) AlB2 (	Alford silt loam, 2 to 6 percent slopes, eroded
AlC2 AlC3	Alford silt loam, 6-12% slopes, eroded	) AlC2 <sup>√</sup>	Alford silt loam, 6 to 7/12 percent slopes, eroded
AlD3 AlD2	Alford silt loam, 12-18% slopes, severely eroded	) AlD3∜ ) )	Alford silt loam, 12 to 18 percent slopes, severely eroded
PrB PrB2	Princeton fine sandy loam, 2-6% slopes	) AnB	Alvin fine sandy loam, J 2 to 6 percent slopes
PrC PrC2	Princeton fine sandy loam, 6-12% slopes	AnC ✓	Alvin fine sandy loam, 6 to 12 percent slopes
PrD PrD2	Princeton fine sandy loam, 12-18% slopes	AnD /	Alvin fine sandy loam, 12 to 18 percent slopes
Ar	Armiesburg silty clay loam	) Ar <sup>V</sup> )	Armiesburg silty clay loam, rarely flooded
Ay	Ayrshire fine sandy loam	) Ay ✓ )	Ayrshire fine sandy loam
Bd	Birds silt loam	Bd 🗸	Birds silt loam 🗸
B1B B1C	Bloomfield loamy fine sand, 2-10% slopes	) B1B ~	Bloomfield loamy fine sand, 2 to 10 percent slopes
BlD	- 1	) BlD (	Bloomfield loamy fine sand, 12 to 18 percent / slopes
ChC	Chelsea loamy fine sand, 4-10% slopes	ChC	Chelsea loamy fine sand, 4 to 10 percent slopes
NgF NeF	Negley loam, 25-50% slopes	ClF ✓	Chetwynd loam, 25 to 50 percent slopes

Field Symbol	Field Mapping Unit Name		Pub. Symbol	Approved Mapping Unit Name
OsA	Oshtemo sandy loam, 0-3% slopes	)	CoA ♥	Conotton sandy loam, O to 3 percent slopes ✔
Du	Dumps, mine		Du 🗸	Dumps, mine $\nu$
Ak	Adrian Variant muck		Ed 🗸	Edwards Variant muck, drained $\checkmark$
Eka MaA	Elkinsville silt loam, 0-2% slopes	)	EkA 🗸	Elkinsville silt loam, O to 2 percent slopes ~
E1A E1B2	Elston sandy loam, 0-3% slopes	)	ElA 🇸	Elston sandy loam, 0 to 3 percent slopes
OrB	Strip mine		FaB ✓	Fairpoint shaly silt loam, 0 to 8 percent slopes
St	Cardonia shaly silt loam, 35-90% slopes	)	FbG ✓	Fairpoint very shaly silt loam, 35 to 90 percent $\checkmark$ slopes
На	Haymond silt loam		На 🗸	Haymond silt loam, frequently flooded ✓
НЬ	Haymond silt loam		Нь 🗸	Haymond silt loam, rarely flooded $\checkmark$
Нс	-	)	Hc ✓	Haymond Variant loamy sand, frequently flooded $\checkmark$
HeA	Henshaw silt loam, 0-2% slopes	)	HeA 🏒	Henshaw silt loam, 0 to 2 percent slopes
HkF HcF WeF WeF2	Hickory loam, 25-50% slopes	))))	HkF /	Hickory loam, 25 to 50 percent slopes ✓
HoA MuA	Hosmer silt loam, 0-2% slopes	)	НоА 🗸	Hosmer silt loam, 0 to 2 percent slopes
HoB2 HoB3 MuB2	Hosmer silt loam, 2-6% slopes, eroded	)	нов2	Hosmer silt loam, 2 to 6/percent slopes, eroded

Field Symbol	Field Mapping Unit Name	Pub. Symbol	Approved Mapping Unit Name
HoC3 HoC2	Hosmer silt loam, 6-12% slopes, severely ) eroded	НоСЗ -	Hosmer silt loam, 6 to 12 percent slopes, severely eroded
HoD3 HoD2	Hosmer silt loam, 12-18% slopes, severely eroded	HoD3 √	Hosmer silt loam, 12 to 18 percent slopes, severely eroded $ u$
IoA	Iona silt loam, 0-2% ) slopes	IoA 🏑	Iona silt loam, 0 to 2 percent slopes
IvA	Iva silt loam, 0-2% )	IvA U	Iva silt loam, 0 to 2 / percent slopes
Kn	Kings silty clay	Kn ✓	Kings silty clay
La	Landes loamy sand	La 🗸	Landes loamy sand 🗸
Rs	Ross loam	Lo 🗸	Lomax loam 🗸
Ly Rn	Lyles fine sandy loam )	Ly 🗸	Lyles fine sandy loam 🗸
МъВ2	Markland silt loam, 2-6% slopes, eroded ()	MbB2 v	Markland silt loam, 2 to 6 percent slopes, eroded
McA	McGary silt loam, 0-2% slopes )	McA ✓	McGary silt loam, 0 / to 2 percent slopes
No	Nolin silty clay )	No 🗸	Nolin silty clay loam, rarely flooded
Pb Ev Pa Mt	Patton silty clay )	Pb ✓	Patton silt loam ✓
Pg	Peoga silt loam	Pg /	Peoga Variant silt loam 🗸
Pt	Petrolia silty clay )	Po 🗸	Petrolia silty clay loam, frequently flooded 🗸

Field Symbol	Field Mapping Unit Name		Pub. Symbol	Approved Mapping Unit Name
Ps	Proctor silt loam		PsA 🔑	Proctor silt loam, 0 to 2 percent slopes
Ra	Ragsdale silt loam		Ra V	Ragsdale silt loam 🗸
ReA	Reesville silt loam, 0-2% slopes	)	ReA√	Reesville silt loam, 0 to 2 percent slopes
Ws	Westland loam		Sa 🧳	Selma loam✓
Wt	Westland clay loam, drained	)	Sc 🗸	Selma clay loam
SbA	Shipshe sandy loam, 0-2% slopes	)	SdA 🗸	Stockland sandy loam, 0 to 2 percent slopes
SyB2 IoB2 IoB3	Sylvan silt loam, 2-6% slopes, eroded	)	SyB2 <sub>V</sub> ∕	Sylvan silt loam, 2 to 6 percent slopes, eroded
SyC3 SyC2	Sylvan silt loam, 6-12% slopes, severely eroded	)	SyC3	Sylvan silt loam, 6 to 12 percent slopes, severely eroded
SyD3 SyD2	Sylvan silt loam, 12-18% slopes, severely eroded	)	SyD3 🗸	Sylvan silt loam, 12 to 18 percent slopes, severely eroded
SyF SyF2	Sylvan silt loam, 25-40% slopes	)	SyF 🗸	Sylvan silt loam, 25 to 40 percent slopes
G.P.	Gravel pits		UdB /	Udorthents, gently / sloping
Vn	Vincennes loam		Vn 🗸	Vincennes loam
Vo	Vincennes Variant clay loam	)	Vo /	Vincennes clay loam, gravelly substratum 🗸
Wa	Wakeland silt loam		Wa √	Wakeland silt loam, frequently flooded
Ca	Carlisle muck		₩b 🗸	Wallkill silt loam

Field Symbol	Field Mapping Unit Name	Pub. Symbol	Approved Mapping Unit Name
Wc	Wallkill Variant )	Wc /	Wallkill silt loam, — clayey substratum
Zp	Zipp silty clay	Zp /	Zipp silty clay $\checkmark$
Zt	Zipp silty clay, gravelly substratum )	Zt 🗸	Zipp silty clay, V

# Series established by this correlation:

None

# Series dropped or made inactive:

None

#### Certification Statement:

The state soil scientist has certified that mapping is complete and that both the detailed maps and the general soil map are joined. The state soil scientist further certifies that the interpretations are all joined and that the soil survey area type locations are accurately located.

## Verification of Cooperator's Names:

The citations, as they will appear on the cover and on the inside of the front cover of the manuscript, are as follows:

United States Department of Agriculture Soil Conservation Service in cooperation with Purdue University Agricultural Experiment Station and Indiana Department of Natural Resources Soil and Water Conservation Committee

# Disposition of Field Sheets:

The original field sheets for Knox County will be kept at the Indiana State Office where they will later be compiled and finished.

# Prior Soil Survey Publications:

The prior soil survey publication for Knox County was in 1943. This survey contains a less detailed map. The current survey updates this prior survey and provides additional interpretative information.

#### Instructions for Map Compilation and Map Finishing:

The symbols on the following conventional and special symbols legend are those that will be used in map finishing with exception of the symbol for dumps and other non-soil areas and the symbols for severely eroded spots. Both of these symbols are dropped.

The symbol for sanitary landfill is added to the legend as a result of this correlation.

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CONVENTIONAL AND SPECIAL SYMBOLS LEGEND Sad Survey Area: Knox County

U.S. DEPARTMENT OF AGRICULTURE SO LICONSERVATION SERVICE 8

Date: 2/79

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
CULTURAL FEATURES		CULTURAL FEATURES	(cont.)	SPECIAL SYMBOLS FOR	
50UHQARIE3		MISCELLANEOUS CULTURAL FEATURES		SOIL SURVEY SOIL DELINEATIONS AND SOIL SYMBOLS	
Metiome), state, or province		Farms(red, house (omit in urban areas	•	ESCARPHENTS CAA	Fo82
County or parish	-	Church	ı		
Minor Civil Sivision		School	•		
		Indian mound (Tabel)	^		
Land grave			,	GULLY ~	
Field sheet matchine & realine					_
AD HOC BOUNDARY ( seet )				MISCELLANEOUS	
Small airport, airfield, park, oxifield,					
cemetery, or flood pool		WATER FEATURES	:		
STATE COORDINATE TICK		DRAINAGE			
LAND DIVISION CORNERS (sections and land grants)	_ +	Perennial, double line			
ROADS	1 1	Perennial,zingle line		Outries and other surelar non-seel areas	Ξ
Civided (mediant shows if scale persuits)		Intermittent	~ !		
County, fame or rance		Orainege end		. Rock outcrop (includes sandstone and share)	V
		Canets or ditches			
AGAD EMBLEMS & DESIGNATIONS					
		Drainage and/or intigation		Severely eroded spot	÷
Federal	287		ļ		
\$2a10	<u> </u>				
		LAKES, PONDS AND RESERVOIRS		RECOMMENDED AD HOC SOIL SYMBOLS	
RAILROAD		Perenmai	water w	Sanitary landfill	Ħ
				(each symbol represents 5 acres	
		MISCELLANEOUS WATER FEATURES		or less)	
LEVEES					
SHIP-out road [+21111]33					
	,				
	İ				
DAMS		/ mm.na	lun - 30	1070	
		Approved:	June 18,	19/9	
Medium or small	<u> </u>				
				$\alpha / \alpha$	

Maurice Stout, Jr. Head, Soils Staff

Midwest TSC

CONVERSION LEGEND RELATING FIELD SYMBOLS TO THE PUBLICATION SYMBOLS

Field Symbol	Publication	Field	Publication	Field	Publication
Symbol	Symbol	Symbol	Symbol	Symbol	Symbol
AdB	AdB	HeA	HeA	PrC2	AnC
AdC	AdB	HkF	HkF	PrD	AnD
Ak	Ed	HoA	НоА	PrD2	AnD
AlA	AlA	HoB2	НоВ2	Ps	PsA
AlB2	AlB2	HoB3	HoB2	PsA	PsA
AIDZ	MIDZ	110113	11002	IBN	130
AlC2	AlC2	HoC2	HoC3	Pt	Po
AlC3	AlC2	HoC3	HoC3	Ra	Ra
AlD2	AlD3	HoD2	HoD3	ReA	ReA
AlD3	AlD3	HoD3	HoD3	Rn	Ly
AnB	AnB	IoA	IoA	Rs	Lo
AnC	AnC	IoB2	SyB2	Sa	Sa
AnD	AnD	IoB3	SyB2	SbA	$\operatorname{SdA}$
Ar	Ar	IvA	IvA	Sc	Sc
Ay	Ay	Kn	Kn	Sk	Ay
Bd	Bd	Ľа	La	St	FbG
BlB	BlB	Lo	Lo	SyB2	SyB2
BlC	BlB	Ly	Ly	SyC2	SyC3
BlD	BlD	MaA	EkA	SyC3	SyC3
Ca	₩b	MbB2	MbB2	SyD2	SyD3
ChC	ChC	McA	McA	SyD3	SyD3
CIIC	CHC	IICA	nen	5yb5	5725
ClF	ClF	Mt	Pb	SyF	SyF
CoA	CoA	MuA	НоА	SyF2	SyF
Du	Du	MuB2	НоВ2	UdB	UdB
Ed	Ed	NeF	ClF	Vn	Vn
EkA	EkA	NgF	ClF	Vo	Vo
		- 3			
ElA	ElA	No	No	Wa	Wa
E1B2	ElA	OrB	FaB	₩b	Wb
Ev	Pb	OsA	CoA	Wc	Wc
FaB	FaB	Рa	Pb	WeF	HkF
FbG	FbG	РЬ	Pb	WeF2	HkF
G.P.	UdB	Рg	Pg	Ws	Sa
На	На	Po	Po	Wt	Sc
НЬ	Нb	PrB	AnB	Zp	Zp
Нс	Нс	PrB2	AnB	Zt	Zt
HcF	HkF	PrC	AnC		20
11.0.1	1111	110	11110		

# CLASSIFICATION OF PEDONS SAMPLED FOR LABORATORY ANALYSIS

# Laboratory Data - Purdue University\*

Sampled As	Sample No.	Publication Map Symbol	Approved Classification
54m5154 115	Dampie Ho.	пар бушьбі	old Billed old
Alford	S77IN83-11	AlB2	Alford
Armiesburg	S76IN83-19	Ar	Armiesburg
Armiesburg	S75IN83-3	Ar	Armiesburg
Ayrshire	S76IN83-3	Ay	Ayrshire taxadjunct
Sleeth	S77IN83-18	Ay	Ayrshire taxadjunct
Birds	S77IN83-12	Bd	Birds
Birds	S75IN83-12	Bd	Birds taxadjunct
Bloomfield	S77IN83-10	BlB	Bloomfield taxadjunct
Bloomfield	S76IN83-8	BlB	Bloomfield taxadjunct
Negley	S76IN83-17	ClF	Chetwynd
Oshtemo	S75IN83-2	CoA	Conotton taxadjunct
Elkinsville	S77IN83-4	EkA	Elkinsville taxadjunct
Elston	S76IN83-18	ElA	Elston taxadjunct
Haymond	S77IN83-7	На	Haymond
Genesee	S75IN83-6	На	Haymond
Henshaw	S77IN83-3	HeA	Henshaw
Wellston	S77IN83-17	HkF	Hickory
Hosmer	S75IN83-1	HoA	Hosmer
Iva	S77IN83-1	IvA	Iva
Kings	S76IN83-13	Kn	Kings
Ross	S76IN83-22	Lo	Lomax taxadjunct
Lyles	S75IN83-11	Ly	Lyles
Lyles	S75IN83-10	Ly	Lyles
Lyles	S75IN83-4	Ly	Lyles
Henshaw	S76IN83-5	McA	McGary
Patton	S76IN83-6	Pb	Milford
Nolin	S75IN83-5	No	Nolin
Montgomery	S77IN83-2	Pb	Patton
Patton	S77IN83-5	Pb	Patton
Peoga	S77IN83-16	Pg	Peoga Variant
Petrolia	S77IN83-6	Po	Petrolía
Proctor	S77IN83-19	PsA	Proctor taxadjunct
Ragsdale	S77IN83-13	Ra	Ragsdale
Reesville	S76IN83-11	ReA	Reesville
Westland	S75IN83-7	Sc	Selma taxadjunct
Westland	S75IN83-8	Sa	Selma taxadjunct
Westland	S76IN83-20	Sc	Selma
Shipshe	S76IN83-2	SdA	Stockland taxadjunct

<sup>\*</sup>SCS-SOILS-8 forms have been prepared.

Sampled As	Sample No.	Publication Map Symbol	Approved Classification
Sylvan	S76IN83-10	SyB2	Sylvan
Sylvan	S77IN83-14	SyB2	Sylvan
Vincennes	S75IN83-9	Vo	Vincennes
Zipp	S76IN83-1	Vo	Vincennes taxadjunct
Wakeland	S76IN83-14	Wa	Wakeland
Westland	S75IN83-13	Sa	Westland taxadjunct
Zipp	S76IN83-12	Zp	Zipp
Zipp	S75IN83-14	Zp	Zipp

# Engineering Test Data

Sampled As	Sample No.	Publication Map Symbol	Approved Classification
Armiesburg	S76IN83-19	Ar	Armiesburg
Haymond	S77IN83-7	На	Haymond
Hosmer	S76IN83-4	HoA	Hosmer
Kings	S76IN83-13	Kn	Kings
Westland	S76IN83-20	Sc	Selma
Shipshe	S76IN83-2	SdA	Stockland

Notes to Accompany Classification and Correlation of the Soils of Knox County, Indiana

> by Steve R. Base

#### ADE SERIES

The soil in Knox County is a taxadjunct to the series because it has a loamy fine sand B2t horizon.

#### ALFORD SERIES

The type location for the Alford series is in Knox County. Indiana is proposing to change the classification from a Typic Hapludalf to an Ultic Hapludalf. Data from several states indicate that some pedons have less than 60 percent base saturation at the critical depth and others have a base saturation of more than 60 percent. After reviewing the data on hand, it appears two different procedures were used to obtain percent base saturation. In order to determine the proper classification, a study is being initiated to (1) review all existing data; (2) make an interlaboratory comparison of results of the base saturation (sum of cations) from a number of pedons where base saturation has been determined; and (3) select six representative sites each from Indiana, Illinois, and Ohio and determine the base saturation at the critical depth through the NSSL.

#### BLOOMFIELD SERIES

This soil is a taxadjunct to the series because it is too sandy.

#### CONOTTON SERIES

This soil is a taxadjunct to the Conotton series. It has formed in outwash from calcareous till and is generally less acid throughout the profile. It also contains less coarse fragments in the Ap horizon and is thought to have mixed mineralogy.

## EDWARDS VARIANT

This soil is variant to the Edwards series because it has sandy material in the lower part of the profile. It is a marly, euic, mesic Limnic Medisaprists.

#### ELKINSVILLE SERIES

This soil is a taxadjunct to the series because it has a low base saturation. It is a fine-silty, mixed, mesic Typic Hapludult.

#### ELSTON SERIES

This soil is a taxadjunct to the series because it lacks an argillic horizon and contains more coarse sand in the B3 horizon than is allowed within the series.

## HAYMOND VARIANT

This soil is a variant to the Haymond series because it has a sandy surface.

#### LANDES SERIES

The pedon from Knox County as well as the type location for the series appears to be sandy rather than coarse-loamy. Illinois proposes to change the classification to sandy in the near future.

#### LOMAX SERIES

This soil is a taxadjunct to the series because it has a thinner and darker B horizon, less than 35 percent fine sand and coarser sand in the control section, and has moderate permeability.

#### PEOGA VARIANT

This soil is a variant of the Peoga series because it contains more clay than is allowed within the range of the series.

## PETROLIA SERIES

Indiana considers this soil has a cambic horizon; however, the lab data (S77IN83-6) indicates an irregular VFS/TOTAL SAND RATIO with increasing depth and an organic carbon content of 0.59 percent at 50 inches.

#### PROCTOR SERIES

This soil is a taxadjunct to the Proctor series because it lacks an argillic horizon. It does not have the 1.2 clay increase between the A and B horizons.

## VINCENNES SERIES

The representative pedon for Knox County is also the type location for the series. The lab data at this site indicates the soil is nonacid. Indiana intends to propose this change in classification in the near future.

#### CLASSIFICATION OF SOILS

Soil Series	Family o	or	Higher	Taxonomic	Class

Ade\* Psammentic Argiudolls; coarse-loamy, mixed, mesic

Alford Typic Hapludalfs; fine-silty, mixed, mesic

Alvin Typic Hapludalfs; coarse-loamy, mixed, mesic

Armiesburg Fluventic Hapludolls; fine-silty, mixed, mesic

Ayrshire Aeric Ochraqualfs; fine-loamy, mixed, mesic

Birds Typic Fluvaquents; fine-silty, mixed, nonacid,

mesic

Bloomfield\* Psammentic Hapludalfs; coarse-loamy, mixed, mesic

Chelsea Alfic Udipsamments; mixed, mesic

Chetwynd Typic Hapludults; fine-loamy, mixed, mesic

Conotton\* Typic Hapludalfs; loamy-skeletal, mixed, mesic

Edwards Variant Limnic Medisaprists; marly, euic, mesic

Elkinsville\* Ultic Hapludalfs; fine-silty, mixed, mesic

Elston\* Typic Argiudolls; coarse-loamy, mixed, mesic

Fairpoint Typic Udorthents; loamy-skeletal, mixed, nonacid,

mesic

Haymond Typic Udifluvents; coarse-silty, mixed, nonacid,

mesic

Haymond Variant Typic Udifluvents; coarse-silty, mixed, nonacid,

mesic

Henshaw Aquic Hapludalfs; fine-silty, mixed, mesic

Hickory Typic Hapludalfs; fine-loamy, mixed, mesic

Hosmer Typic Fragiudalfs; fine-silty, mixed, mesic

Iona Typic Hapludalfs; fine-silty, mixed, mesic

<sup>\*</sup>Taxadjunct - See Notes to Accompany Classification and Correlation of the Soils of Knox County, Indiana, for details.

Soil Series	Family or	Higher	Taxonomic Class

Iva Aeric Ochraqualfs; fine-silty, mixed, mesic

Kings Vertic Haplaquolls; fine, montmorillonitic, mesic

Landes Fluventic Hapludolls; coarse-loamy, mixed, mesic

Lomax\* Cumulic Hapludolls; coarse-loamy, mixed, mesic

Lyles Typic Haplaquolls; coarse-loamy, mixed, mesic

Markland Typic Hapludalfs; fine, mixed, mesic

McGary Aeric Ochraqualfs; fine, mixed, mesic

Nolin Dystric Fluventic Eutrochrepts; fine-silty, mixed,

mesic

Patton Typic Haplaquolls; fine-silty, mixed, mesic

Peoga Variant Typic Ochraqualfs; fine, mixed, mesic

Petrolia Typic Fluvaquents; fine-silty, mixed, nonacid, mesic

Proctor\* Typic Argiudolls; fine-silty, mixed, mesic

Ragsdale Typic Argiaquolls; fine-silty, mixed, mesic

Reesville Aeric Ochraqualfs; fine-silty, mixed, mesic

Selma Typic Haplaquolls; fine-loamy, mixed, mesic

Stockland Typic Hapludolls; loamy-skeletal, mixed, mesic

Sylvan Typic Hapludalfs; fine-silty, mixed, mesic

Udorthents Typic Udorthents; sandy-skeletal, mixed, mesic

Vincennes Typic Haplaquepts; fine-loamy, mixed, nonacid,

mesic

Wakeland Aeric Fluvaquents; coarse-silty, mixed, nonacid,

mesic

Wallkill Thapto-Histic Fluvaquents; fine-loamy, mixed,

nonacid, mesic

Zipp Typic Haplaquepts; fine, mixed, nonacid, mesic